UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,070	10/28/2003	Sung Kwon Hong	2060-3-73	5964

7590 01/17/2007

JONATHAN Y. KANG, ESQ.
LEE, HONG, DEGERMAN, KANG & SCHMADEKA
14th Floor
801 S. Figueroa Street
Los Angeles, CA 90017-5554

EXAMINER	
PHU, PHUONG M	
ART UNIT	**PAPER NUMBER**
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/696,070	HONG, SUNG KWON	
	Examiner	Art Unit	
	Phuong Phu	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-14 and 16-19* is/are rejected.

7)☒ Claim(s) *5 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/5/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
The oath or declaration is unreadable due to a printing/copying problem.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6-9, 11-14 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hakkinen et al (7,095,290).

-Regarding to claim 1, see figures 1 and 3, and col. 2, line 1 to col. 3, line 27, Hakkinen et al discloses a method (see figure 1) comprising:

procedure (72) (see figure 1) of receiving a symbol (71);

procedure (e.g., see the second column of Table 1 shown in figure 3) of determining whether the symbol comprises at least one DTX bit "dtx" during a mapping (1,1,dtx) to (1,-1,0) (see col. 3, lines 19-27);

procedure (mapping (1,1,dtx) to (1,-1,0)) (see figure 3) of mapping the symbol to a predetermined mapping point [I, Q] on an IQ plane (see col. 3, lines 19-27);

procedure (inherently included in mapping (1,1,dtx) to (1,-1,0)) (see figure 3) of minimizing a transmission power level if the symbol has at least one DTX bit (since symbol [dtx, dtx] is mapped to point [0, 0], symbol [0, dtx] to [1, 0], symbol [dxt, 0] to [-1, 0] while symbol [0, 0] to [1, 1], symbol [0, 1] to [1, -1] and symbol [1, 0] to [-1, 1] under the mapping (1,1,dtx) to (1,-1,0)) (see col. 3, lines 19-27); and

procedure (comprising (73, 75, 77, 79)) (see figure 1) of transmitting the symbol in the transmission power level of the mapping point (see col. 2, lines 17-44).

-Regarding to claim 2, Hakkinen et al discloses the mapping point is calculated by averaging signal points to form 8 PSK constellation with constant amplitude of squrt(2), the averaging in which, (see figure 3), bits corresponding to non-DTX bits of the symbol are approximately identical with each other on the IQ plane, (wherein non-DTX symbol [0, 0] is mapped to [1, 1], non-DTX symbol [0, 1] to [1, -1] and non-DTX symbol [1, 0] to [-1, 1] under the mapping (1,1,dtx) to (1,-1,0)) (see figure 3, col. 3, lines 19-27).

-Regarding to claim 3, Hakkinen et al discloses that the mapping point is set in consideration of at least one of a number of the non-DTX bits, a number of the selected signal points, and locations of the selected signal points on the IQ plane (see figure 3).

-Regarding to claim 4, Hakkinen et al discloses that the symbol is mapped to an origin of the IQ plane, when at least one bit of the symbol is a DTX bit, (see figure 3, under mapping (1,1,dtx) to (1,-1,0), symbol [dtx, dtx] is mapped to the original point [0, 0]).

-Regarding to claim 6, Hakkinen et al discloses that the mapping point is set in consideration of plus and minus symbols of the signal points on the IQ plane, (see figure 3, non-DTX symbols [1, 0] and [0, 1] are mapped to plus and minus symbols [-1, 1] and [1, -1], respectively, under mapping (1,1,dtx) to (1,-1,0)).

-Claim 7 is rejected with similar reasons set forth for claim 3.

-Claim 8 is rejected with similar reasons set forth for claim 4.

-Claim 9 is rejected with similar reasons set forth for claim 2.

-Regarding to claim 11, as similarly applied to claims 1-4 and 6-9 set forth above and herein incorporated, Hakkinen et al discloses a system comprising:

means (72) (see figure 1) for receiving a symbol (71);

means (e.g., see the second column of Table 1 shown in figure 3) for determining whether the symbol comprises at least one DTX bit during a mapping (1,1,dtx) to (1,-1,0) (see col. 3, lines 19-27);

means (mapping (1,1,dtx) to (1,-1,0)) (see figure 3) for mapping the symbol to a predetermined mapping point on an IQ plane (see col. 3, lines 19-27);

means (inherently included in mapping (1,1,dtx) to (1,-1,0)) (see figure 3) for minimizing a transmission power level if the symbol has at least one DTX bit; and

means (comprising (73, 75, 77, 79)) (see figure 1) for transmitting the symbol in the transmission power level of the mapping point (see col. 2, lines 17-44).

-Claim 12 is rejected with similar reasons set forth for claim 2.

-Claim 13 is rejected with similar reasons set forth for claim 3.

-Claim 14 is rejected with similar reasons set forth for claim 4.

-Claim 16 is rejected with similar reasons set forth for claim 6.

-Claim 17 is rejected with similar reasons set forth for claims 3, 7.

-Claim 18 is rejected with similar reasons set forth for claim 4.

-Claim 19 is rejected with similar reasons set forth for claim 2, 9.

5. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Willengger (6,996,069).

-Regarding to claim 10, see figure 2A, and col. 4, lines 9-66, Willengger discloses a system (see figure 2A) comprising:

a transport channel (TrCH) multiplexer (232) for multiplexing radio frames from a plurality of transport channels into a composite transport channel (CCTrCH);

a discontinuous transmission (DTX) insertion module (234) for inserting DTX bits into the radio frames of the CCTrCH;

a physical channel segmentation module(236) for segmenting the CCTrCH for different physical channels (PhCHs) to produce a plurality of segments;

an interleaver (238) for interleaving the segments; and

a physical channel mapping module (240) for mapping the segments to the corresponding PhCHs.

Allowable Subject Matter

6. Claims 5 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Phu
12/22/06

Phuong phu

PHUONG PHU
PRIMARY EXAMINER

Phuong Phu
Primary Examiner
Art Unit 2611